REMARKS

Initially, in the Office Action dated July 29, 2004, the Examiner rejects claims 1-8 and 11 under 35 U.S.C. §101. Claims 1-11 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,636,862 (Lundahl et al.).

By the present response, Applicants have submitted new claim 12 for consideration by the Examiner and assert that this claim does not contain any prohibited new matter. Further, Applicants have amended claims 1-11 to further clarify the invention. Claims 1-12 remain pending in the present application.

35 U.S.C. §101 Rejections

Claims 1-8 and 11 have been rejected under 35 U.S.C. §101. Applicants have amended the claims of the present application to further clarify the invention and respectfully request that these rejections be withdrawn.

35 U.S.C. §102 Rejections

Claims 1-11 have been rejected under 35 U.S.C. §102(e) as being anticipated by Lundahl et al. Applicants respectfully traverse these rejections.

Lundahl et al. discloses dynamic analysis of data represented in distinctive matrices. If two data matrices X and Y are present in which corresponding rows of X and Y each refer to the same underlying object, a relationship can develop between the X and Y data matrices, which allows for a prediction of responses in Y on the basis of inputted X-data. And, if a third data matrix Z is present in which corresponding columns of Y and row of Z each refer to the same underlying object, a

relationship can develop between the X Y and Z data matrices, which allows for link between X and Z through Y.

Regarding claims 1, 8 and 11, Applicants submit that Lundahl et al. does not disclose or suggest the limitations in the combination of each of these claims of, inter alia, preparing a plurality of prediction models arranged in an hierarchical tree structure in a computer, calculating with the prediction model in a first root layer of the hierarchical tree structure, an output value from at least one attribute included in the input data by a calculation unit of the computer, selecting the prediction model in a subsequent layer of the hierarchical tree structure according to the output value by a selection unit of the computer, repetitiously executing the output value calculation step and the subsequent layer prediction model selection step while shifting the layer to a leaf side of the hierarchical tree structure until the prediction model of a final leaf layer of the hierarchical tree structure is reached, or calculating a score from the input data using the prediction model of the final leaf layer by the calculation unit. These limitations in the claims of the present application are neither disclosed nor suggested by Lundahl et al. The limitations in the claims of the present application relate to a mutlilayer prediction model that includes a plurality of prediction models in a hierarchical tree structure (see Fig. 3). The score or attribute is predicted from the input data in a layer by a model. The predicted score or attribute is used to select the model in the next layer and the prediction is made by the selected model.

The Examiner asserts that Lundahl et al. discloses a score calculation method of calculating a score using data at col. 33, lines 40-45. However, these portions of

Lundahl et al. merely disclose the recursive model constructing method of Lundahl et al., in which the weight W is made smaller for the older data. This relates to updating the model. This is not calculating a score from the data, as recited in the claims of the present application.

Further, the Examiner asserts that a plurality of layers and preparing a prediction model is disclosed in Lundahl et al. at col. 42, lines 40-50 and col. 43, lines 20-25. However, these portions of Lundahl et al. (claims section) merely disclose that row objects of a first data matrix can be related to a second data matrix and that subsequent submission of column values in a second data matrix of a row object allows for a prediction of the column values in a first data matrix. This is not preparing a plurality of prediction models arranged in an hierarchical tree structure, as recited in the claims of the present application. These portions of Lundahl et al. merely relate to dynamically updating the prediction model (S).

Moreover, the Examiner asserts that Lundahl et al. discloses calculating according to a prediction model in a first layer at col. 31, lines 25-65 and col. 32, lines 5-35. However, these portions of Lundahl et al. merely disclose how to construct the prediction model and how to update the model. The prediction model is constructed using the recursive model by PLS (partial least squares) method or OLS method. Further, the prediction model is calibrated to improve its prediction capability. This is not calculating with the prediction model in a first root layer of an hierarchical tree structure, an output value from at least one attribute included in the input data, as recited in the claims of the present application. These portions of

Lundahl et al. do not relate or disclose anything related to selection of the prediction model in a subsequent layer. The Examiner has asserted the same portions of Lundahl et al. recited previously to reject other limitations in the claims of the present application. However, as noted previously, Lundahl et al. does not disclose or suggest the limitations in the claims of the present application. Specifically, Lundahl et al. does not disclose or suggest selecting the prediction model in a subsequent layer of the hierarchical tree structure according to the output value, as recited in the claims of the present application. Further, Applicants submit that Lundahl et al. does not disclose or suggest repetitiously executing the output value calculation step and the subsequent layer prediction model selection step while shifting the layer to a leaf side of the hierarchical tree structure prediction model until the prediction model of a final leaf layer of the hierarchical tree structure is reached. Moreover, the cited reference does not disclose or suggest calculating a score from the input data using the prediction model of the final leaf layer by a calculation unit.

Regarding claims 2-7, 9, 10 and new claim 12, Applicants submit that these claims are dependent on one of independent claims 1, 8 and 10 and, therefore, are patentable at least for the same reasons noted regarding these independent claims. For example, Applicants submit that Lundahl et al. does not disclose or suggest storing at least one threshold value in a storing unit of the computer where the selection of the prediction model in the subsequent layer is determined according to the output value and the stored threshold value by a selection unit, or displaying a

number of uses of an attribute used in the all layers on a display unit connected to the computer.

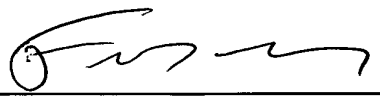
Accordingly, Applicants submit that Lundahl et al. does not disclose or suggest the limitations in the combination of each of claims 1-12 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-12 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (referencing attorney docket no. 500.39461X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Frederick D. Bailey
Registration No. 42,282

FDB/sdb
(703) 312-6600